

PATENT APPLICATION
Mo-6931
LeA 35,798

AF
JFW

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION OF)
WOLFGANG BRAUER ET AL) GROUP NO.: 1711
SERIAL NUMBER: 10/043,738) EXAMINER: RABON A. SERGENT
FILED: JANUARY 9, 2002) RESPONSE TO
TITLE: CONTINUOUS PRODUCTION OF) EXAMINER'S ANSWER
THERMOPLASTIC)
POLYURETHANE ELASTOMERS)

REPLY BRIEF

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450
Sir:

This Reply Brief is being submitted, in triplicate, to rebut certain arguments raised by the Examiner for the first time in the Examiner's Answer dated October 19, 2004.

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an enveloped addressed to: Commissioner for Patents, Alexandria, VA 22313-1450 12/01/04

Date

James R. Franks - Reg. No. 42,552

Name of applicant, assignee or Registered Representative

James R. Franks

Signature

December 1, 2004

Date

REMARKS

Claims in the case are 5 and 7-11.

For the first time, under Item-(8), bridging pages 2 and 3 of the Examiner's Answer, the Examiner argues that in line 16 of Claim 7, the "and" following "catalyst;" is improper and should not be present. Appellants respectfully disagree. The "and" in question is used relative to process steps (i) and (ii) of Claim 7 (e.g., a process consisting of: step-(i); and step-(ii)). The "and" in question was presented in Appellants' amendment dated 1 April 2004. In light of the preceding remarks, the "and" following "catalyst;" in line 16 of Claim 7 is deemed to be proper and correct.

For the first time, on page 3 of the Examiner's Answer, the Examiner presents arguments relative to United States Patent No. 3,901,852 (**Shah**) with recitation of "a molecular weight of 600 to 3,000." Appellants wish to point out that Shah's disclosure of a molecular weight range of 600 to 3,000 is made relative to the polyethylene glycol of his process. See column 1, lines 54-55 of Shah.

For the first time, on page 5 of the Examiner's Answer, the Examiner argues that steps (A), (B) and (C) of United States Patent No. 5,905,133 (**Müller et al**) are encompassed by step (i) of Appellants' claimed process. Appellants respectfully disagree. Müller et al's step-(A) involves mixing a polyol and an organic di-isocyanate. In step-(B) of Müller et al's process, a prepolymer is formed from the mixture of step-(A). Then in step-(C), Müller et al mix the prepolymer formed in step-(B) with additional organic di-isocyanate, thereby forming a mixture of prepolymer and organic di-isocyanate. See the abstract; column 2, lines 37-65; column 5, lines 48-55; and column 6, lines 18-20 of Müller et al.

Müller et al's steps (A), (B) and (C) result in the formation of a mixture of prepolymer and organic di-isocyanate. Step-(i) of Appellants' claimed process results in the formation of a prepolymer alone. As such, Müller et al's steps (A), (B) and (C) are not reasonably encompassed by, and do not reasonably extend to or touch upon step-(i) of Appellants' claimed process.

For the first time, on page 5 of the Examiner's Answer, the Examiner argues that Müller et al's steps (D), (E) and (F) are encompassed by step-(ii) of Appellants' claimed process. Appellants respectfully disagree. Steps (D) through (F) of Müller et al involve: (D) cooling the prepolymer / di-isocyanate mixture of step (C); (E) mixing the cooled prepolymer / di-isocyanate mixture of step (D) with diol and optionally triol and/or diamine; and (F) reacting continuously the mixture of step (E), e.g., in an extruder, to form a thermoplastic polyurethane (TPU).

Step-(ii) of Appellants' claimed process involves reacting the prepolymer of step-(i) with 1,4-di-(2,2'-hydroxyethyl)-hydroquinone, in an extruder. Müller et al's steps (D) through (F), or just (E) and (F) alone, involve reacting a mixture of prepolymer, organic di-isocyanate and diol to form a TPU. Müller et al do not disclose or suggest reacting only a prepolymer and a diol in the absence of an organic di-isocyanate. As such, Müller et al's process steps (D), (E) and (F), or (E) and (F) alone, are not reasonably encompassed by, and do not reasonably extend to or touch upon step-(ii) of Appellants' claimed process.

For the first time, on page 5 of the Examiner's answer, the Examiner argues that Müller et al's process step-(D) is optional. Appellants respectfully disagree. In support of this position, the Examiner references column 5, lines 58-60 of Müller et al. Lines 58-60 of Müller et al are directed to step-(B) of Müller et al's process alone. At column 5, line 5 through column 6, line 4 of Müller et al, the cooling step-(D) is discussed. As such, Müller et al's disclosure clearly teaches the necessary presence of step-(D) in their process. It is respectfully submitted that the Examiners' position relative to Müller et al's step-(D) being optional, is an improper assumption. Examiner's assumptions do not constitute the disclosure of prior art. *In re Rijckaert*, 9 F.3d 1531, 1533, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993) wherein the Court of Appeals, Federal Circuit stated:

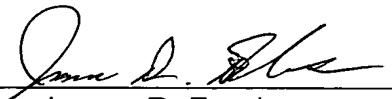
"[i]n rejecting claims under 35 U.S.C. section 103, the examiner bears the initial burden of presenting a prima facie case of obviousness ... A prima facie case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art ... If the examiner fails to establish a prima facie

case, the rejection is improper and will be overturned. *Id.* at 1532 (citations omitted). Rijckaert argues that the examiner has not established a prima facie case of obviousness and that the examiner's assumptions do not constitute the disclosure of prior art. *Id.* at 1533. We agree. *Id.*

Regardless, even in the absence of step-(D), Müller et al's remaining steps (E) and (F) are not reasonably encompassed by, and do not reasonably extend to or touch upon step-(ii) of Appellants' claimed process, as discussed previously herein.

In light of the reasons discussed herein and those discussed at length in their Appeal Brief, Appellants maintain their position that the Examiner's rejections are improper. Appellants respectfully request that these rejections be reversed, and that Claims 5 and 7-11 be allowed.

Respectfully submitted,

By 
James R. Franks
Agent for Appellants
Reg. No. 42,552

Bayer MaterialScience LLC
100 Bayer Road
Pittsburgh, Pennsylvania 15205-9741
(412) 777-3808
FACSIMILE PHONE NUMBER:
(412) 777-3902
s:\shared\kgb\jrf322rbr